CLAIMS

1. A method for defruiting the transponder responses received by a secondary radar in response to interrogations emitted by the radar in a recurrent manner, a recurrence being formed by the interrogation and the responses received in the course of a listening period following the interrogation, the defruiting method comprising a test of the synchronism of the responses received in various recurrences, characterized in that a first response received in a recurrence i is considered synchronous with a second response received in another recurrence j if:

$\rho_j \in \left[\rho_i - V_{\max} \times (t_j - t_i);\ \rho_i - V_{\min} \times (t_j - t_i)\right]$ when $t_j > t_i$, or

$\rho_j \in \left[\rho_i - V_{\min} \times (t_j - t_i);\ \rho_i - V_{\max} \times (t_j - t_i)\right]$ when $t_j < t_i$,

where:

- V_{min} and V_{max} are respectively the minimum and maximum radial speed of the transponders with respect to the secondary radar, positive by convention for a transponder approaching the radar, the speeds V_{min} and V_{max} possibly being equal, at least V_{min} or V_{max} being nonzero;
- ρ_i and ρ_j are respectively the distance at which the transponder has been detected in recurrence i and in recurrence j;
- t_i and t_j are respectively the instant of emission of the interrogation in recurrence i and in recurrence j.

2. The method as claimed in claim 1 in which a distance tolerance is used to perform the synchronism test.

3. A method of defruiting in which defruiting methods as claimed in claim 1 are applied in parallel to different radial speed bins [Vmin; Vmax].

4. The method as claimed in claim 3 in which the radial speed bins are contiguous.

5. The method as claimed in claim 3 in which the radial speed bins are equidistributed.

6. The method as claimed in claim 1 in which the synchronism test is performed in the far field only on the recurrences for which the interrogation azimuth lies in the effective interrogation lobe of the secondary radar.

5

7. A defruiter for extractor of transponder responses comprising a correlation device configured to implement the method as claimed in claim 1.

8. A secondary radar comprising a defruiter as claimed in claim 7.